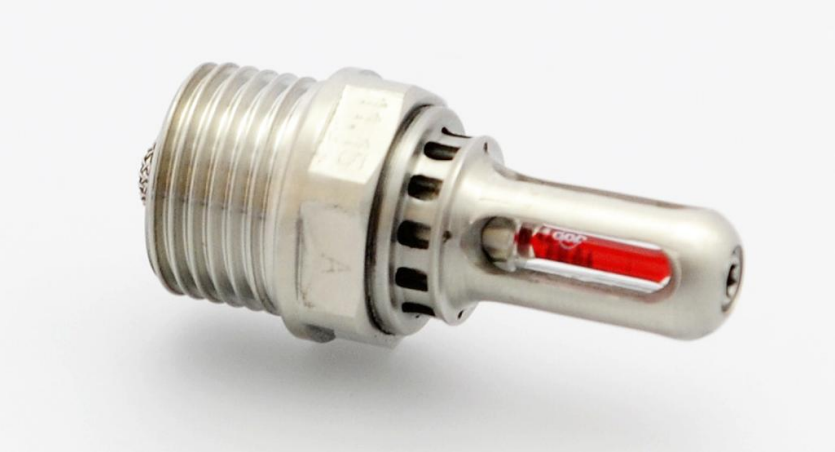
Datasheet
Prev5exp automatic low pressure water mist nozzle
Part 1

General description
The Prevent Systems low pressure water mist nozzle Prev5exp with fast response thermally actuated bulb, is approved by the Loss Prevention Certification Board (LPCB), and listed in the “Red Book”, which can be viewed at RedBookLive.com.



Technical Data

Approvals	LPCB
Minimum operating pressure	2.4 bar
Maximum operating pressure	16 bar
Maximum standby pressure*	12 bar
K-factor	30
Minimum flow rate	46.5 lpm
Minimum water density	2.9 mm/m^2/min
Nozzle material	Stainless steel 304
Thread size	½” BSP or NPT
Strainer	0.24mm Stainless steel
Thermally actuated bulb	Fast response 3 x 16, RTI 36 (ms)$^{1/2}$
Release temperature	57˚C, 68˚C, 79˚C, 93˚C, 141˚C
Nozzle position	Pendent
Nozzle size	Total length = 52mm, max. diameter = 24mm
SIN	Prev5exp

*The jockey-pump shall be set to maintain the standby pressure in the system, up to a maximum of 12 bar.

Installation

The nozzles must be handled carefully before, -under and -after installation. Nozzles that are damaged in any way must be replaced. Follow these installation steps:

- The temperature bulb must be checked for damage prior to installing the nozzle into the nozzle fitting. A small air bubble in the temperature bulb should easily slide back and forth when tilting the nozzle. There should be no loss of liquid or cracks in the bulb.
- Slide the cover plate onto the nozzle, where applicable.
- Apply pipe thread or sealant to the nozzle threading before hand-tightening it into the nozzle fitting.
- Use an extended 23 mm socket wrench and carefully tighten the nozzle.

Operation

During a fire, the fluid in the fast response thermally actuated glass bulb will expand and shatter. The nozzle valve would then drop down, allowing the water to flow through the nozzle and suppress or extinguish the fire.

Maintenance

The nozzles must be handled carefully before, -under and -after installation. Nozzles that are damaged in any way must be replaced. The nozzles shall not be painted, coated or otherwise altered after leaving the factory.

Notes

For a full description, please refer to the Design, Installation, Operation and Maintenance (DIOM) manual. A full training course is offered for the appropriate design, installation, operation and maintenance of Prevent Systems low pressure water mist automatic fire suppression systems.
Prevent Systems water mist nozzles are produced and tested to stringent in-house quality standards according to ISO 9001.

Revision history

Rev. 1 – April 2014
Rev. 2 – August 2015
Rev. 3 – January 2016
Rev. 4.0 – Part 1 and Part 2 – February 2016 - revised for LPCB certificate
Rev. 5.0 – Part 2 – September 2025 - revised for EN 14972-series

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Part 2

The Prev5exp is designed and successfully tested for fixed water mist fire protection systems for use in commercial low hazard occupancies within buildings, according to EN 14972-7, cat. 3 and BS 8489-7, cat. 3. This would include protection of typical OH-1 areas such as offices, schools, heritage including churches, and public areas in care institutions, hospitals, hotels, etc.

Design
Each system shall be hydraulically designed according to the minimum water flows and water pressure, as specified in the Technical Data section, and the maximum allowable coverage area for the nozzles, as described below. The system must meet the design requirements specified by the Authorities Having Jurisdiction (AHJ).

Application	Commercial low hazard occupancies
Max coverage area	4m x 4m = 16 m^2
Spacing between nozzles*	Maximum 4m, minimum 2m
Distance to wall**	Maximum 2m, minimum 0.3m
Maximum ceiling height***	5m
Distance from ceiling	0 – 150mm
Piping (non-corrosive)	Stainless steel, PrevPex, RedPipe, CPVC, subject to approval in each case.
Fire test standard	EN 14972-17, cat. 3 and BS 8489-7, cat. 3

*The maximum spacing between nozzles is 4m and up to 2m from the wall at ceiling heights between 3m and 5m. Maximum spacing between nozzles at ceiling heights below 3m is 3.5m, and up to 1.75m from the wall.
**Distance from walls can be exceeded in one direction by up to 20% if the other direction is reduced correspondingly, so that the maximum coverage area per nozzle does not exceed 16m^2 or 80m^3 volume.
***The Prev5exp nozzle can be installed up to a 5m ceiling height. Ceiling heights exceeding 5m are subject to approval in each case.

The DIOM manual chapter 5 describes in detail the design requirements and limitations, nozzle spacing, positioning with respect to obstacles, ceiling slopes, etc. Chapter 6 covers hydraulic calculations.

Limited Warranty

10-year limited product warranty on Prevent Systems low pressure water mist nozzles.

The warranty shall cover:
This warranty applies to the full extent permitted by law. The warranty applies to the original buyer for 10 years from date of purchase against defects in material or production workmanship, and only if the nozzles are paid for in full, installed and maintained pursuant to Prevent Systems directions for installation and maintenance. Nozzles found to be defective shall be repaired or replaced by Prevent Systems. Prevent Systems will not cover any costs or obligations in connection with the sale, repair, or replacement without prior written agreement.

The warranty rights shall follow the building and shall apply to the person who can document that he/ she owns the building.

The warranty does not cover:
The warranty does not cover incorrect handling, storage, design or installation of the water mist nozzles. Prevent Systems shall not be liable for any indirect or consequential damages, including labor charges, and the liability shall not exceed the amount of the sales price.

Notification of claim:
Notification of claims which fall under this warranty shall be reported to Prevent Systems in writing without delay, so that immediate action to remedy the issue can be taken.

The rights of this warranty are a supplement to the additional rights of the buyer on the basis of the legislation.

Contact

For further information or for signing up for a training course, please contact us at post@prevent-systems.no or via our web-site www.prevent-systems.com.